

REMARKS

Claims 2-21 are pending. Claim 1 is canceled. Claims 8 and 21 are amended herein.

Claim Amendments

Claim 8 has been amended to recite keeping said laser means pointed away from a portion of the joint that has been welded. Claim 21 has been amended to improve readability and to recite moving the laser means with respect to the joint such that a component of the angle of incidence of said laser means is maintained oriented along the same direction as relative motion between said laser means and said joint and such that said laser means is pointed towards a direction away from a portion of said joint that has been welded, thereby forming an elongated weld having a weld pool that is pushed along said joint. Support for the amended language is found in original claim 1, paragraph [0026] of the specification and figure 1. No new matter has been added.

Claim Rejections - 35 U.S.C. §112

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2-21 as being indefinite under 35 U.S.C. §112, second paragraph. The Examiner stated that the recitation in claims 8 and 21 of “keeping said laser means pointed towards a portion of the surface that remains to be welded” is vague. Applicant has amended claims 8 and 21 to recite pointing the laser means away from a portion of the joint that has been welded. Applicant submits that the amended language is definite under 35 U.S.C. §112, second paragraph.

Claim Rejections - 35 U.S.C. §103

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 21, 2-5 and 8-17 under 35 U.S.C. §103(a) as being unpatentable over Applicant’s Admitted Prior Art (AAPA) in view of Mattes (USP 6,143,998), in view of the Welding Skills and Practices handbook, and in view of the Metals Handbook Ninth Edition (Laser Beam Welding).

In order for a claimed invention to be obvious, all of the claim recitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Furthermore, in order to establish a prima facie case of obviousness, the prior art must provide some motivation to make the claimed invention. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442. A prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Claim 8 recites keeping said laser means pointed away from a portion of the joint that has been welded. Claim 21 recites moving the laser means with respect to the joint such that a component of the angle of incidence of said laser means is maintained oriented along the same direction as relative motion between said laser means and said joint and such that said laser means is pointed towards a direction away from a portion of said joint that has been welded, thereby forming an elongated weld having a weld pool that is pushed along said joint. Claims 8 and 21 both recite maintaining an angle of incidence of said laser means at values other than 0° with respect to the perpendicular to the surface to be welded. The cited references do not provide motivation to make the combination asserted by the Examiner to arrive at the claimed method, and the references teach away from each other and the claimed method such that one of ordinary skill in the art would not seek to combine them as the Examiner has done.

AAPA discloses laser welding a silver plate to a copper body but does not disclose maintaining an angle of incidence of the laser means at values other than 0° with respect to the perpendicular to the surface to be welded or keeping the laser means pointed away from a portion of the joint that has been welded. Mattes relates to use of spot welds for joining two contact portions, but does not teach the claimed method of moving the laser means to create an elongated weld. Welding Skills and Practices teaches a drawn welding method wherein the laser is pointed so as to draw the weld pool to the joint to be welded, which is opposite the claimed method. Metals Handbook teaches keeping the laser beam substantially perpendicular to the surface to be welded while moving along the joint to be welded. Thus, Mattes teaches away from forming an elongated weld as is taught in Welding Skills and Practices and Metals Handbook, while Welding Skills and Practices teaches away from the drawn welding method of

Metals Handbook. Metals Handbook further teaches keeping the laser beam substantially perpendicular to the surface to be welded, which teaches away from keeping the electrode at a nonzero angle with respect to the perpendicular as is disclosed in Welding Skills and Practices. Thus, when the references are considered in their entirety, they teach away from each other and the claimed method in several respects. As such, the references cannot be combined with each other to arrive at the claimed method without the improper application of hindsight reconstruction and destruction of the overall teachings of the references. Therefore, Applicant submits that claims 21, 2-5 and 8-17 are not obvious over the cited references.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 6, 7 and 18-20 under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Mattes, in view of Welding Skills and Practices, in view of the Metals Handbook and further in view of Chang et al. (USP 4,230,930). Claims 6, 7 and 18-20 depend from claim 21. The combined teachings of AAPA, Mattes, Welding Skills and Practices and Metals Handbook do not render claim 21 obvious for the reasons stated above. Chang et al. does not supply any teachings or motivation relevant to the missing elements and motivation in AAPA, Mattes, Welding Skills and Practices and Metals Handbook with regard to claim 21. Therefore, claims 6, 7 and 18-20 are not obvious over the combined disclosures of AAPA, Mattes, Welding Skills and Practices, Metals Handbook and Chang et al.

Conclusion

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 22106-00060-US1 from which the undersigned is authorized to draw.

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Respectfully submitted,

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